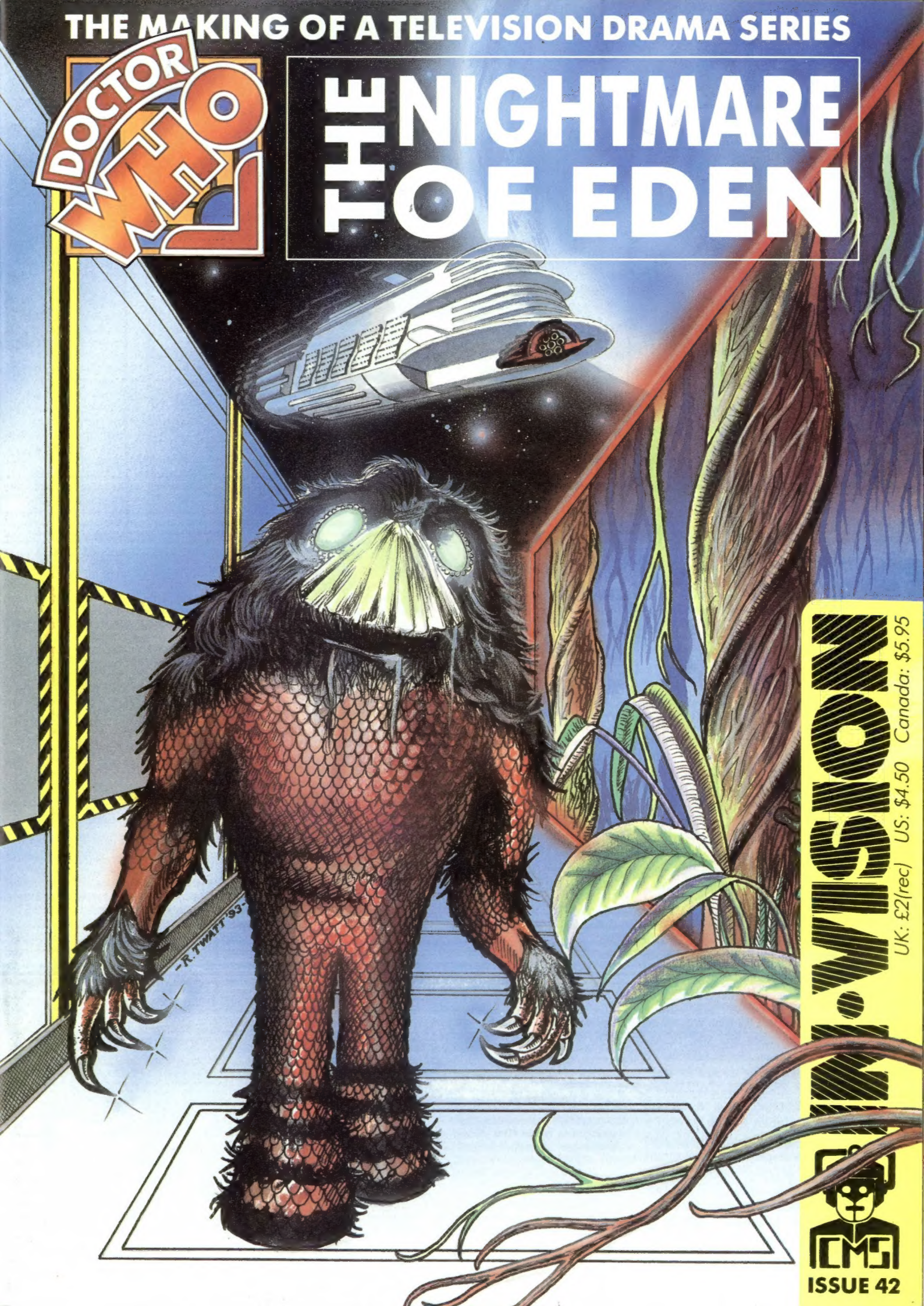
THE MAKING OF A TELEVISION DRAMA SERIES

DOCTOR WHO

THE NIGHTMARE OF EDEN



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Season 17
Story 107 (5K)
Episodes 518-521

NIGHTMARE OF EDEN is sometimes overlooked by contemporary fans, whose attentions were perhaps more focused on other Who activity. Apart from the cancellation of SHADA and the earlier heights of CITY OF DEATH, coverage of this interesting story was not extensive, as we explain in this issue's *Audience* section.

The story is unusual in the context of Season 17, in that it deals seriously with a contemporary theme, drugs. We are shown no grisly deaths from withdrawal symptoms (both the addicts, Rigg and Secker, die by other means), probably because the horror would be unacceptable for the transmission time, but the portrayal of craving for drugs is well-written and excites revulsion. The Doctor takes a strong moral stance on the issue.

On the production side, the story was an inexpensive part of the season. Nevertheless, there was a variety of innovative electronic effects, as A.J. "Mitch" Mitchell explains in this issue's interview. □

Origins

THE MONEY was beginning to run out. In 1977 Philip Hinchcliffe had estimated the cost of a **Doctor Who** episode at around £20,000. In just over two years that figure, for the same standard of programme making, had increased by more than fifty percent due to the effects of inflation running, in 1979, at nearly 25%. Hinchcliffe had been fairly successful obtaining more money for the programme. But with cost rises in television far exceeding those of the outside world, Graham Williams had not been so lucky. What little budget increases he got were purely those accorded across the board to BBC drama in general.

DESTINY OF THE DALEKS and, especially, CITY OF DEATH had been expensive shows. Even THE CREATURE FROM THE PIT had exceeded its projected costs, thanks largely to losing one day's production at Ealing and a need to re-shoot all its model work.

The loss of the day at Ealing was due to an industrial dispute and so, in part, that money could be re-claimed. But the decision to film all the model work again had been on artistic grounds, and so that money was irrecoverable. Against this background Graham Williams had to plan his spending for the remaining three stories of the season.

Unlike the season 16 finale, Williams wanted this year's six-parter to look expensive, and end the year,

and his time as producer, on a high-note. To do that, however, meant bringing in stories four and five on a shoestring. And this would affect most of the creative departments working on the story. □

Script

EVER since their original contract to do a **Doctor Who** story in 1971 Bob Baker and Dave Martin had followed a policy of submitting two or three story ideas each year in the hope of getting at least one of them commissioned. Since then very few years had gone by without that initiative having born fruit. With Dave Martin having decided to go his own way in terms of writing, Bob Baker saw no reason for not continuing this practice. Along with one other storyline, a synopsis for a four-parter entitled 'Nightmare of Evil' was submitted to the **Doctor Who** Production Office early in 1979.

The idea had come from a script he and Dave Martin wrote for Philip Hinchcliffe's action/adventure police series **Target** in 1977, about drug trafficking and the effects of drugs on their addicts, one of whom had been played by ex-**Doctor Who** companion Katy Manning. Given that the programme had a large following among young people, and that the show was not averse to making moral points, a benefit was seen doing a story warning about the perils of taking drugs.

Another source of inspiration was the emerging science of holography and the production of holograms. Holograms capture an apparently three-dimensional image onto specially coated glass. Therefore, reasoned Baker, why not a future development whereby a whole living environment could be snapshot as an electromagnetic signal and stored within a crystal, or even broadcast along a laser beam?

The disaster movie was also a popular film genre in the 1970s, particularly the *Airport* series. The original *Airport* film

cost ten million dollars but earned 45 million, and had spawned three further films. The most recent of which had been *The Concorde: Airport '79* (released later in Great Britain as *Airport '80: The Concorde*), which featured the state-of-the-art 1970s luxury passenger aeroplane. □

Characters

Dymond

DYMOND first seems to be the aggrieved victim of a space crash, though we should be suspicious of anyone with such a cavalier attitude to the space lanes. Quite what he would have done had the *Empress* and *Hecate* not actually collided remains unclear, though the spaceliner could hardly have missed him in one way or another.

Mostly, he blusters about demanding his rights and complaining. He is brusque and irritating, which does not endear him to the people he would most want to avoid annoying - the customs officials.

He is cool enough to find his way back to Hecate during the ships' separation, and even to check on the profits he expects from 'Project Eden' (casually logged on *Hecate*'s computer).

But he shows no remorse when eventually caught out, suggesting that he is a hardened professional in his chosen, cruel trade. He doesn't care about vrax addicts, and doesn't feel a defence is worth stating - unlike his pathetic collaborator Tryst. □

Rigg

RIGG is a hard-nosed space liner captain with no illusions about the glamour of his job. The tedium of the *Empress*' milk run between Station Nine and Azure has made him blasé, and finding Dymond's ship hurtling towards him when he comes out of hyperdrive takes him totally unawares.

But he is no fool, and when the Doctor arrives, Rigg's experience and natural instincts soon lead him to check his credentials - when he discovers that Galactic Salvage and Insurance went bust twenty years previously. But he is also pragmatic enough to overlook this deception, realising that the Doctor can help him out of a tricky situation.

Rigg just wants to do his job, and is prepared to turn his hand to anything which will keep things running smoothly. He is a man with responsibility: for his ship, for his crew and for nine hundred passenger.

His demise is undeserved. Accidentally hooked on vraxoin when he takes a drink intended for Romana, and driven mad by his craving for another fix, he attacks her and is shot by Fisk. We do not learn if Rigg is dead, but he is never mentioned again. □

Stott

LIKE so many in the story, Stott is not what he first seems. A Major in the intelligence section of Space Corps, he worked as a member of Tryst's zoological expedition and was caught unawares by those he was trying to trap.

Tryst's incompetence is what saved Stott. Not only did Tryst not finish him off after shooting him with a ray gun, he also assumed that the subsequent Mandrel attack on Stott had killed him - and that a visprint would be enough to convince the others of the same. Worse, he then managed to scoop up Stott in the CET recording. Stott remains trapped for 183 days, which suggests something about his Space Corps survival training (or perhaps the rations in his survival capsule which Tryst also manages to scrape off the surface of Eden into his recording).

We first see Stott as a shadowy figure spying on Romana from the Eden projection. Then he is a fugitive, dressed like a liner passenger and leading the Doctor a furious chase through the *Empress*. He has shrewdly noticed the difference around the edge of the projection, and surmised that escape is possible - rather than just mooning around staring out at Della. He has realised too that others will be able to see him in the projection, which is why he lurks in the undergrowth for much of the time.

Stott is a resourceful, clean cut hero whose natural integrity obviously appealed to Della. □

Della

DELLA is Tryst's assistant, a rather naive young woman who had some sort of relationship with the Stott before he disappeared on Eden. However, she is not so attached to her apparently late-lamented lover that she trusts a visprint rather than seeing his body, and her attachment is light enough that she didn't clutch a straw of hope when she thought she had seen him in the Eden projection.

She is quite uncritical of Tryst's methods, despite her close contact with him which must have left her with few illusions about his zoological practices. She is also in complete ignorance of his financial plans. fro her reactions when it is suggested, Romana leaves us in little doubt that Della is incapable of being behind any plot on the *Empress*.

However Della does show natural concern for Secker when he is fatally injured by the mandrels, and then later stops Romana watching the CET image of Eden because she is apparently pained by the memory of losing Stott. Or is she just worried that she may see him lurking in the bushes again? □

Tryst

TRYST is a zoologist, apparently a harmless eccentric of Germanic descent whose ambition is to catalogue every species of animal and plant in the galaxy - clearly a hugely over-ambitious project. His government subsidy has been cut to the extent that he now only receives free travel on spaceliners (albeit first class.). So he is seeking sponsorship from a contact on Azure.

He has just completed a tour of planets collecting samples for his Continuous Event Transmuter (CET). Visiting the last of these planets, the trip was marred by the death of Stott, one of his ten-strong expedition.

Unlike Tryst, the Doctor sees the CET for what it is - an electronic zoo which strips pieces from the surface of planets. Tryst's immorality, however, extends to the methods he uses to finance his expeditions. He has no problems using his zoological discovery that Mandrels are new vraxoin source for personal gain - whether financial or professional, since the former is the means to the latter. Indeed, he professes to the end that he is concerned to preserve animal species, though his understanding of natural selection evidently brings him to conclude that millions have a choice about whether they use vraxoin.

But as he cynically demonstrates when he doses a drink with the drug, one fix is fatal - not much choice for the human species, then.

Fortunately, his moral deficiencies are matched by his criminal incompetence. His spiked risk gets to the wrong victim. And without the assistance of his mentor, he makes a hash of the CET by not providing the osmosis damper which would have kept his valuable cargo inside the projection.

At the end, he can understand neither the reasons why his plan failed nor why the Doctor is so disgusted by his professional ethics. □

Script editing

THE INVENTIVENESS of the plot appealed to Douglas Adams, and the story was formally commissioned in Spring 1979. By then, however, Bob Baker had become heavily involved with Robert Banks Stewart, both script-editing and writing some of the early episodes of **Shoestring**. Although precise dates are difficult to pin down, it is known Baker was working on the four rehearsal scripts for 'Nightmare of Evil' as late as June 1979, just over a month away from their studio production.

This late in the season story production order could not be juggled, therefore material had to be ready for rehearsals in July. As delivered the scripts contained some strong material - monsters savaging innocent liner passengers, several characters under the effects of drugs and, very prominently, a violent attack on Romana by a drug-taker suffering the effects of withdrawal. After reading the scripts, Graham Williams approved some re-writing to lessen the impact of these potentially disturbing scenes.

Principally the rewrites toned down or pushed into the background details of the use and abuse of the drug itself - Xylophilin, referred by K-9 in the script as, "a fungus, source of the drug XYP; dangerous, addictive, known colloquially as *Zip* ".

The biggest change was de-emphasising the threat to Romana as she is menaced by Rigg, shortly before he gets shot dead by Fisk. At the express wish of Graham Williams, the sequence was changed and then deliberately underplayed in production. This was the original

Rigg: I don't care about the stupid ship, woman! I want something to stop this ... feeling - *(He tries to plead with her).* You can help me, can't you??? I'll give you money ... I've got money - *(He produces some sort of credit cheques)* How much do you want??!!

Romana: *(Feeling sorry for him now)* It's no good. I'm sorry -

(Rigg throws the cheques at her. He moves towards her. She backs off)

Rigg: Why do you make me do this? *(Rigg has murder in his eyes now)* All I want is to be happy again. You don't know how it feels to want that more than anything at all ... Just a little bit, you've got it ... *(By now Romana has backed up against a wall. Rigg comes up close to her.)* Give me some. Or I'll kill you!

Romana: *(Very frightened)* No, I haven't ... got any.

(Rigg slams the walls by the side of her face with his fists. Romana ducks under Rigg's arms and runs over towards the console. Rigg goes after her and catches her just as she gets her hands to the controls. Rigg is wild and raving. He is lurching after Romana, trying to grab her, but his pitiful "cold turkey" condition makes his aim wild and uncontrolled. Romana is easily able to avoid him but she is cornered, and it looks like curtains...)

In order to stress his point about the absolute evil of drug peddling, Bob Baker wrote into the storyline some unusually violent responses for the Doctor which likewise got deleted in the rewrites. Aboard the Hec*ate* there is a sequence where the Doctor taps into Dymond's computer and discovers a balance sheet listing the profits of Tryst and Dymond's *Zip* trafficking. Thrown into a rage the Doctor rips the terminal from the wall and smashes it, cursing incoherently. Then, later when Tryst is arrested, there is a final confrontation between the two men:

Tryst: Doctor, I never wanted to be involved in all this. Tell them it was only for the sake of funding my research. You understand these things. You're a scientist.

Doctor: Tryst?

Tryst: Yes...

Doctor: *(Turning on him)* Shut up, before you make me very angry!

In the televised story, this response becomes a cold, angry: "Go away."

Director and team

DIRECTOR Alan Bromly was not the personal choice of **Doctor Who** producer Graham Williams. He had for many years been a producer as well as director for the BBC, best known in the fantasy genre for his work on the last two seasons of the sf/supernatural anthology series **Out of the Unknown** in the late Sixties/early Seventies. Although well past retirement age in 1979 he still received occasional directing assignments because of his long associations with many senior figures at the BBC as well as ITV - in 1978, for instance, he was directing episodes of Granada's prime-time soap opera (and flagship) **Coronation Street**.

It is not known who "suggested" to Graham Williams the idea of giving Bromly another directing job on **Doctor Who**, although Graeme MacDonald is a distinct possibility due to his close friendship with Irene Shubik (who had produced **Out of the Unknown** before Bromly). Certainly Bromly's previous **Doctor Who**, THE TIME WARRIOR had not been a happy experience for him. Throughout production he had complained repeatedly to Barry Letts about the show's lack of budget, lack of time and lack of resources in general.

The design team for NIGHTMARE OF EDEN (the title changed at the behest of Douglas Adams who felt 'Nightmare of Evil' sounded tautological) comprised two newcomers and two veterans of **Doctor Who**. Both the newcomers were relative juniors, cutting their teeth on what was still regarded as one of the most complex and demanding shows on television. Make-up designer was Joan Stribling whose work on **Doctor Who** and **Blake's Seven** would help to bring her, a year later, to work again with Douglas Adams on the TV adaptation of **The Hitch Hiker's Guide to the Galaxy**. Handling set design was Roger Cann, a theatre design graduate working on attachment at the BBC.

Costume designer Rupert Jarvis was no stranger to low budget **Who**s. He had done one of the all-time cost savers, UNDERWORLD, as well as last season's THE STONES OF BLOOD. Unhappy with the almost non-existent funding for costumes on NIGHTMARE OF EDEN, he approached both Graham Williams and his own department head to ask to work on another, better-costed **Doctor Who** that would more demonstrably reflect his creativity. He was accordingly allocated to SHADA (see ***IN•VISION*** issue 44).

Overseeing the complex requirement for visual effects was one of the BBC's most accomplished designers, Colin Mapson. A renowned model-maker and sculptor, Mapson's involvement with **Doctor Who** dated back to THE GREEN DEATH where he had worked on the maggots and the mechanisms which moved them.

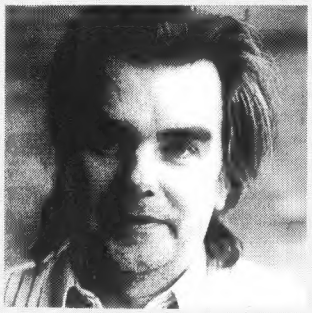
Since 1974, Mapson's credits included THE HAND OF FEAR, IMAGE OF THE FENDAHL and THE INVASION OF TIME where he had revised the head-gear worn by the Sontarans. □

Quantel Leap

The dawn of image processing

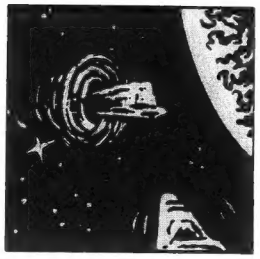
The QUANTEL 3000 was the first true image processing machine used by the BBC.

With its equivalent of one megabyte of memory it could store and enable the reprocessing of individual television picture frames.



Already in season 17 it had been used on CITY OF DEATH and THE CREATURE FROM THE PIT to create trailing/strobe effects around the Doctor and Romana.

***MITCH MITCHELL* talked to IN•VISION about the arrival of the Quantels, and explained how NIGHTMARE OF EDEN was almost a crossover between the old and the new.**



"THE TRAILING effect you see as the *Empress* spaceship goes into hyperspace, or when Tom Baker runs into the dimension gap, is a trick we developed at the BBC, but which the Quantel 3000 was never originally designed to do.

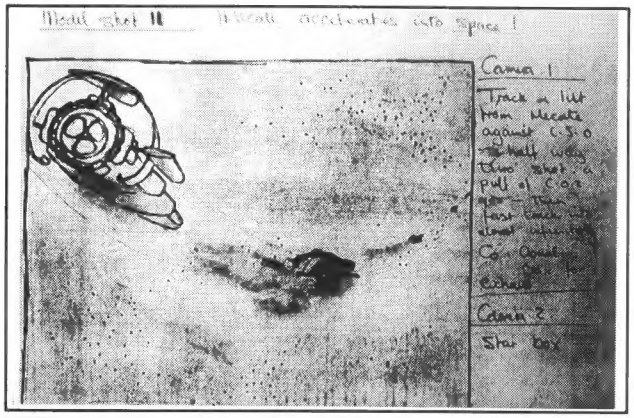
"Essentially the 3000 was a frame store synchroniser, enabling you to sample one frame of a television picture with rock solid clarity. Even with videodisk, if there is a lot of quick movement in a shot you get some flicker between the frames when you freeze the picture. The Quantel 3000 got rid of that flicker so you could do perfect line-ups for effects. What no-one at Quantel had imagined was our idea of taking the output from the 3000 and feeding it back as an input signal into the vision mixer's desk to create a kind of controlled howlaround.

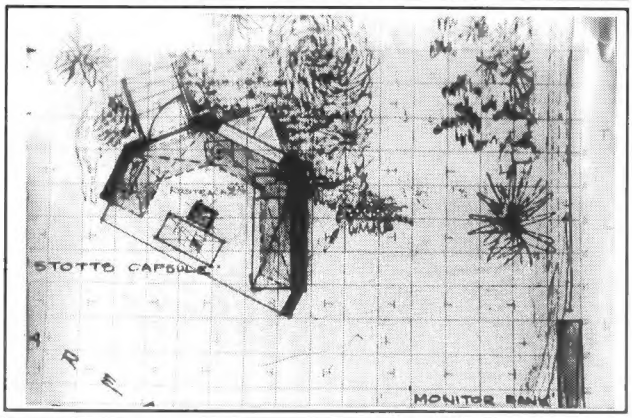
"So for the opening shot in NIGHTMARE OF EDEN you start with a camera trained on the model of the spaceship. The output from the camera goes into a vision mixing desk set up to output that picture fifty percent of the time. Also going into the desk is output from the Quantel 3000, which will form the other fifty percent of the signal coming out from the vision mixer. That composite signal from the vision mixer then goes into the Quantel machine.

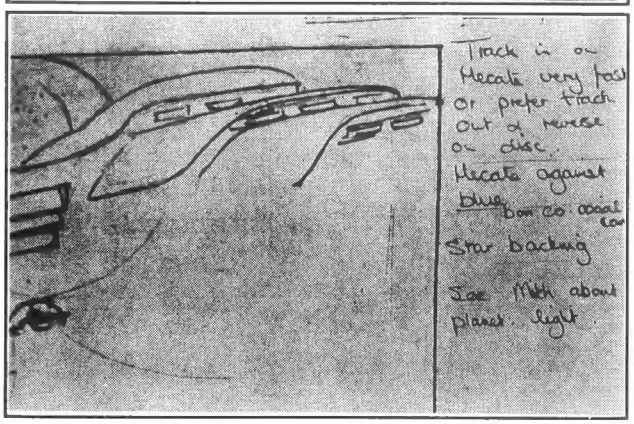
"Now, let us say the memory of the Quantel has been configured to store four frames at a time with the newest frame the clearest and brightest, the oldest frame already decaying. The output signal from the Quantel gets split so that one picture goes down the line to the VT recorder, its twin goes back as an input signal to the vision mixer.

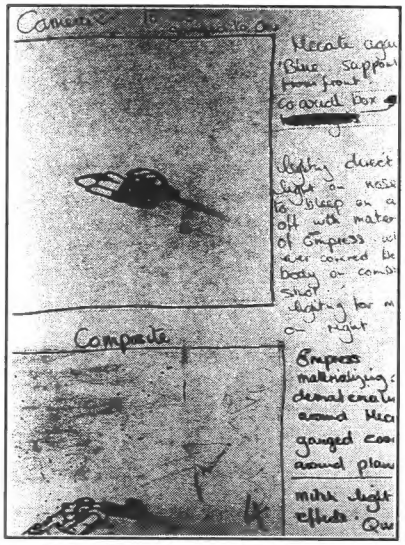
"The end result is this. At the beginning of the sequence you see the spaceship flying away from you. As that picture does through the Quantel one frame gets stored and passed back to the vision mixer. But by the time that signal gets there the vision mixer is already receiving a picture of the spaceship in a slightly different position. So the desk outputs an image of the ship where it is now, plus a trailing image of where it was a split second ago.

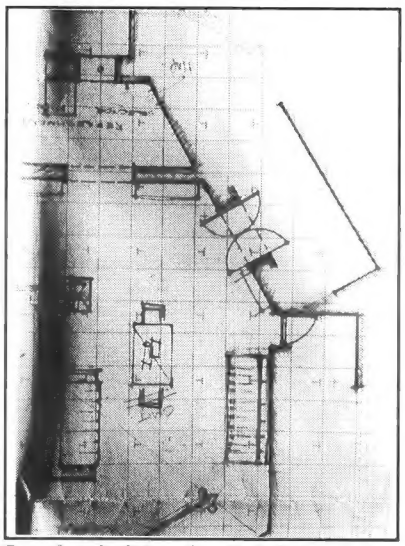
"That picture goes into the Quantel, gets sampled, so that this time two static frames are output and fed back to the mixing desk. And so the process goes on until you get multiple trailing images built up on the >>





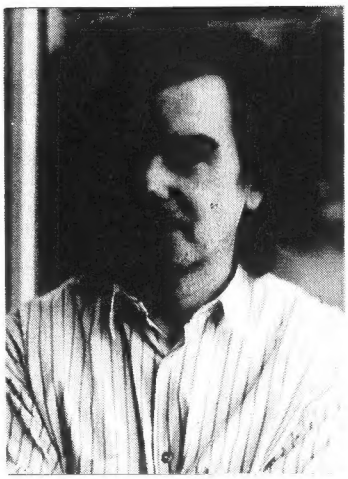






Pages from the designers' notebooks. Left: (1) Colin Mapon's composite shot of Hecate *flying off (part 4), (2) Stott's capsule beside the Eden set, window facing jungle, (3) Mapson's line-up diagram to outline the ship collision (part 1). Above: (1) Storyboard for model sequence, (2) part of block 1 floorplan (lounge of* Empress).

Quantel Leap

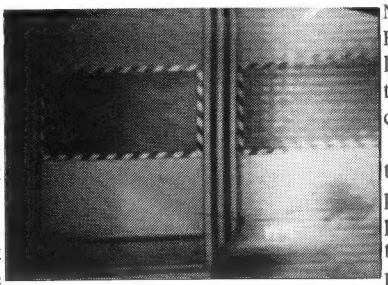


>> output which ultimately gets recorded in the VT suite.

"The other trick you could do with the 3000 was move the position of the stored frames around within the memory to create a swirl effect, which was done a lot on **Top of the Pops**. Initially directors loved this trick which is why you tended to see it so often on television of that period, but I think after a while it was overkilled to the point where people were actually getting sick and tired of seeing trailing shots.

"Quantel themselves were quite staggered by all the ways we were using their machine and began asking us what we wanted from it. We told them that what we wanted was an effects box. Could we zoom in and out of the image? Sure, no problem, they said. What about being able to flip the image? Okay. Hence the development of the Quantel 5000 which was sold specifically as an effects box.

"At the time NIGHTMARE OF EDEN was recorded, the 5000 machine was available, but I don't think the BBC had bought one yet. I seem to recall ringing the marketing manager at Quantel during one of the recording blocks to see if we could get one 'on evaluation', but for whatever reason we never did.



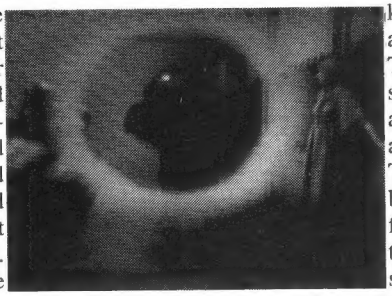
"There was also a lot of good old-fashioned, tried and tested technology on NIGHTMARE OF EDEN. Micro-computers were only just getting going so we still had to fall back on using the Anchor if we wanted to feed lettering onto a screen.

"The Anchor was an antiquated machine which still relied on reading reels of expensive punched aluminium tape to generate the characters. If you wanted to edit or remove end-of-signal characters you literally had to use a manual hand punch or strips of masking tape to make or cover up holes. I'd be surprised if NIGHTMARE OF EDEN wasn't the last **Doctor Who** to use that machine.

"Up until the arrival of proper image processing systems one of our principle effects machine was the EMIBOX (pronounced "Emmy-box"), which we certainly used on NIGHTMARE OF EDEN for the model shot of the shuttle craft leaving its hangar, and in those scenes where you see part of the *Hecate*'s fuselage through a doorway in the liner.

"The EMIBOX was so-called because it was originally built by EMI. They used to be a world leader in television technology until they decided to close down their television operation in the Sixties. They were on the verge of developing an effects box when their department was shutdown. What the BBC did was buy up the two boards EMI had just completed and put them into their own box to make a machine that was capable of producing a wide range of electronically generated shapes and wipes.

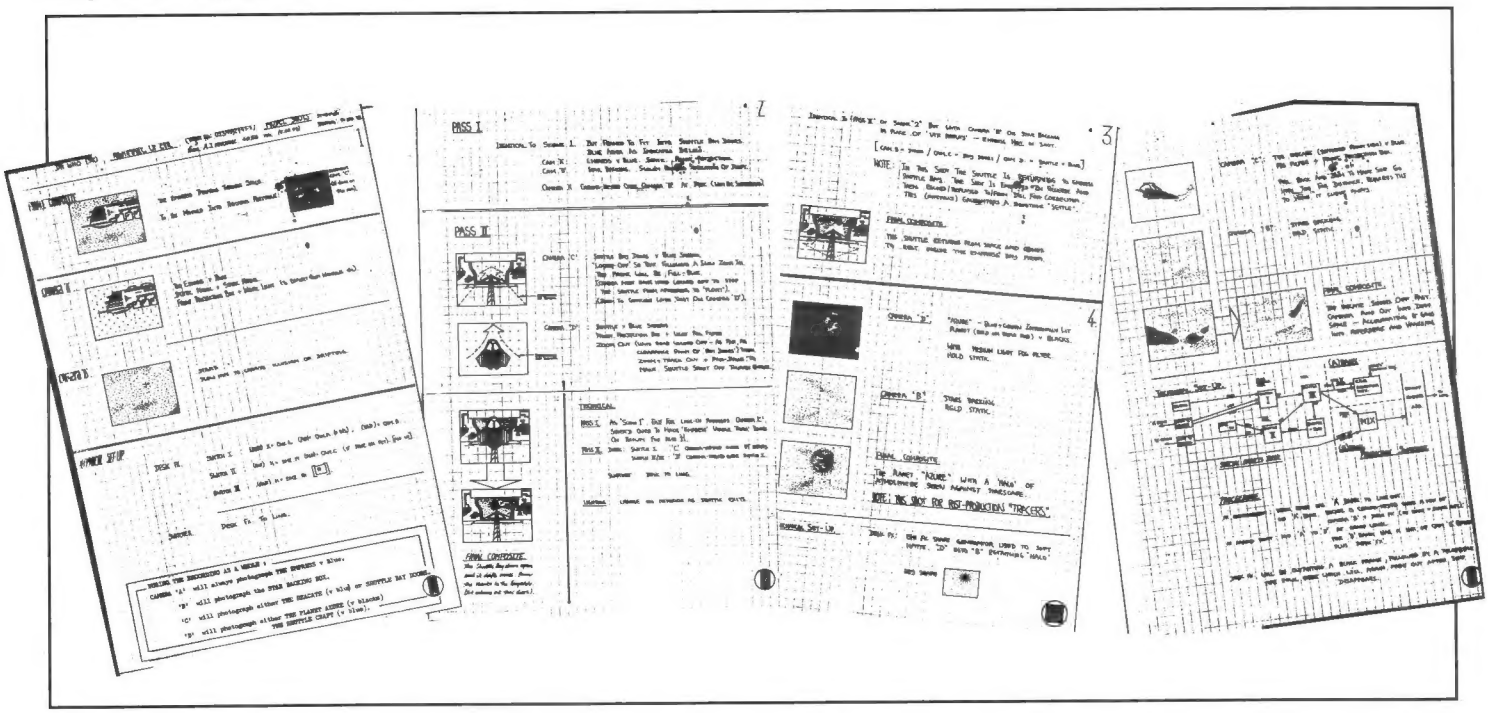
"The dimensional instability was done using the EMIBOX to draw a shape that exactly filled the open archway set aboard the liner. Into that shape we fed the *Venetian Blind* wipe, keyed to blue, to make the cross-bar ripples. Anything that wasn't blue was keyed to see a close-up of the *Hecate*'s fuselage. So the finished picture comprised three keyed in elements; the live-action set of the archway, the Hecate's fuselage and a blue *Venetian Blind* wipe. What then became crucial was the positioning of actors on the live-action set so that they didn't walk into the effect area - in which case the shots would superimpose over each other and the result look ghastly. Unfortunately that happened right at the beginning of episode one; as you see the instability for the first time. The body of one of the crew is in the effect area for a second or two, so you see the effect in front of him rather than behind him. The director should have spotted that, or else had it taken out during editing.



"On the other hand, we knew that would happen in the sequence where K-9 goes up to and through the instability. If you look carefully you'll see where I had to make a small cut-out, the size and shape of K-9's head and ears, and use it to mask out the part of the effect in K-9's path, up to the point where it had to be pulled away quickly as he passes beyond the instability.

"The EMIBOX also enabled us to do the shimmering doughnut effect you see whenever someone gets hit by a ray gun. There the EMIBOX was used to create two circles, one large, one a little smaller, each one run through a soft-edged generator to remove the hard borders. The centre of the larger circle was keyed to the colour blue, the outside set to a colour keyed to the live-action picture. The centre of the smaller one was also set to the live-action picture. The result, once both wipes were fed into the picture, is an outside showing the live-action, a blue, soft-edged doughnut, and then, in the middle, the live-action again. The EMIBOX allowed you to expand the radius of each

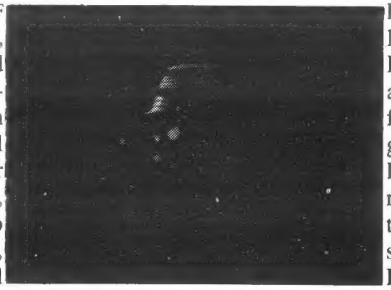
Bottom of this page: four pages from Mitch Mitchell's design notebook for NIGHTMARE OF EDEN (using the original title 'Nightmare of Evil'). Opposite page: Colin Mapson looks pleased with the Empress *model.*



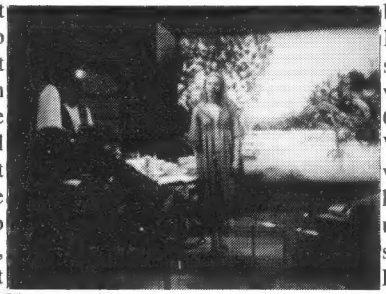
circle dynamically, so it was a relatively simple matter to make the circles radiate outwards to give you an impact effect.

"Another piece of kit we used on this story was the Colour Synthesiser. This had been invented by a guy named Ian Chisholm, again for **Top of the Pops**. There were eight levels of signal output from this device, each level keyed to a different colour. So all you had to do to change the colour of any object being fed through the synthesiser was rotate the gain knob. That's how we made the *Empress* go through all kinds of colours as it collided with the other ship.

"With video effects there are certain ones you can do in the studio on the day, and others that are best done in post-production. With NIGHTMARE OF EDEN we did both, and a lot depended on very close co-operation between myself, the visual effects designer Colin Mapson, and the studio lighting manager, a guy named Warwick Fielding. In all honesty though, Warwick was not up to the task. His background was more variety shows and quiz programmes - not science-fiction models and miniatures.



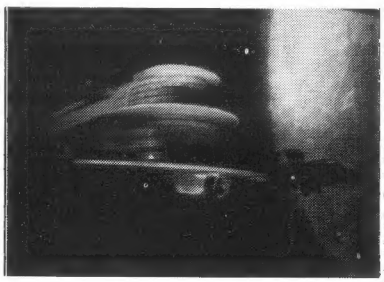
"Unfortunately that becomes apparent when you notice the ghastly way the models are lit. Even in the very first shot you can see the pole holding the model clearly on the left of the picture. Warwick's problem was that he didn't take kindly to criticism. It would have been very much a case of, 'Don't you tell me how to light sets, son!' The very best studio lighting manager, if you could get him, was Brian Clemett. He was one of the few who believed in lighting from the floor.



"Cameramen hated him for it because all those floor lights restricted their movements. We had him for a long time on **Blake's Seven** and whatever faults that programme had, lighting was not one of them. It was streets ahead of **Doctor Who**, except for those **Who**s that Brian Clemett did (PLANET OF EVIL, for example).

"That was part of the reason why I left the BBC after 1980. Also, Dave Jervis, Dave Chapman and myself were doing a designer's job, but because of the organisational set-up of the BBC, our job description still said 'electronic effects operator', which was a title I hated. If you put a credit saying 'Electronic Effects', everybody outside the BBC thinks it's something to do with the music. Graham Williams was very kind in that he agreed to an unofficial credit saying 'Video Effects', but even to have added the word 'Supervisor' would have put a lot of backs up in the Beeb. Luckily I don't think higher management ever watched **Doctor Who**, so we never heard any quibbles about the credit.

"The trouble was, every way we turned we got no help. On several occasions I was blocked from going on courses or on attachment to other job areas simply because my manager could not afford to release me, and neither was his manager prepared to appoint more people to train in video effects so that we could be released more often. Neither did we rate much thought or consideration from Production. If you look at the running order for NIGHTMARE OF EDEN, for example, you will notice that all the video effects sequences are grouped together at the end of the day's recording - the last half-hour or so before they turn the studio lights out and everyone goes off to the bar. So if you hit problems with recording the live-action - and we hit problems on NIGHTMARE - you literally have no time left to do anything other than a very rushed job.



"So mine became a problem of frustration. To get the quality of effects I wanted, I knew what had to be done, but organisationally we were not set-up to be able to achieve it. We would have to have been given some kind of supervisory status, and that the BBC was not prepared to entertain.

"Eventually, three years after NIGHTMARE OF EDEN, they did provide a proper video effects workshop, with a single camera, three VT machines at least, a vision mixer, a Quantel 5000 and, later, a Paintbox. It was everything we needed to do electronic effects properly and had asked for over and over again. But of course, by then, I had finally got pissed off with the BBC and left." □

Set design

THE SETS for NIGHTMARE OF EDEN tended to look cheaper than they were because they were over-lit. Heavy yellow flood-lighting (to suggest the opulence of a liner) threw the walls into harsh relief showing up, all too obviously, elements like the pre-cut panel through which a Mandrel emerges at the end of episode one. It also made it possible to see a hand, lower right, holding the cut panel in place when the Doctor replaces it and asks K-9 to reseal it.

Yellow was the main colour of the *Empress* interior. Most of the walls' contours and edges were highlighted with strips of coloured tape, including black and yellow safety tape normally used spanning safety barriers.

The show's overall lack of money meant that most sets had to be kept very basic - decorated flats with props and dressings provided mostly from stock. The speaker grill in the passenger pallets, for example, was a standard plastic outdoor-drain cover; the chairs on the bridge were familiar office swivel chairs; visible lights on the ship (for example, above the drinks dispensers - see to the right of the Doctor's head in the photo) were exterior wall lights.

The bridge set could afford very few working props; the odd coloured lamp bulb fixed amid ranks of perspex bricks to represent buttons and controls. Even the crew lockers were standard 20th Century filing cabinets (opened with flat plastic "keys").

Viewing monitors were simply television monitors, into which camera pictures were fed on cue. (Unusually, there is a big close up of Dymond on screen, as seen by the people on *Empress*, where the television lines of the monitor are clearly visible for effect.)

Part two's chase sequence, as the Doctor pursues Stott down through the economy class decks utilised one of the oldest tricks in the set designer's handbook. The same set (a curved wall, a doorway and a battery of chairs) was redressed by the simple expedient of altering the deck plaque, rearranging the extras and shooting the sequence from a slightly different angle to suggest the Doctor's hectic pursuit through many levels and pallets. At one point, several steps on the stairs the Doctor is running down obviously shift as he puts his weight on them.

The first class lounge, however, achieved the luxury of duplication. The primary set was the full lounge, with doors and entrance-ways, dressed with sofas, the CET machine prop (from set design not visual effects) and a large blue screen within a frame onto which the CET projections would be thrown. In another part of the studio the flat frame of the projection was duplicated along with a few sofas and tables, adjacent to the full size Eden set which occupied almost one-third of studio TC6's floorspace. This was to enable shots of characters, within the Eden projection, looking back out of their environment into the lounge - thereby stressing a key point in the plot, namely the dimension gap enabling a crossover between environments.

Other sets on the Empress included corridors, lifts, and stairways. A surgical area, where a couple of extras try unsuccessfully to save the life of navigator Secker, was seen through a large perspex window, and was entered through swing doors - elsewhere on the ship, doors slid backwards and forwards within the set walls. The power unit was a series of free-standing blocks with a dark background, between which the Doctor moved to avoid the attacking Mandrel.

One idea which had to be dropped (to speed up recording) was the notion of filling the Eden set with dry-ice fog. One of the first clues, in the script, that the dimensions are crossing over comes when Romana notices that mist from the Eden planet's surface is drifting into the first class lounge. Puzzled by this, she approaches the projection screen, where she is stung by a moth. This was done as an electronic effect to avoid the need for flying a moth puppet on wires - which would have been more expensive and time-consuming to achieve and ran the risk of looking unconvincing.

The one set that had to be lit very darkly was the surface of Eden. This was necessary to disguise its profusion of potted plants (most of them still in their pots) brought in to give substance to what was the largest set of this shoot.

The budget would not run to a painted backdrop, so the scale of the Eden set had to be suggested purely by lighting - darker in the centre and brighter further away. Most shots of the Doctor and Romana exploring were tight one- or two-shots to avoid revealing how small the set was. Stott's survival capsule was a simple, fairly compact set containing stock furniture.

The *Hecate* sets appeared darker largely because they were designed darker. Even so, no expense appeared to be spent on the green table from which Dymond addressed the *Empress*., and a variety of old electrical equipment and plastic bucket seats which filled other areas of the ship. The *Hecate* shuttle set was a small, cramped construction, which made it difficult to believe that Dymond would not have spotted the Doctor crouching immediately behind the equally inexpensive flight seats.

The TARDIS set (seen on the *Empress* scanner as Romana attempts to organise the separation of the ships) was a one-wall flat (with the familiar roundels), in front of which Lalla Ward stood for the short sequence. □

The Mandrels

THE MANDRELS were limited by budget. Perhaps recalling an earlier success with the Axons (or even the Krynoid...) Bob Baker envisaged them as mud-creatures; part animal, part vegetable matter. Dropped from production was a lengthy effects-based sequence shortly after the Doctor and Romana have entered the Eden projection in part three. They step gingerly over a series of muddy mounds as they cross the swamp and head deeper into the jungle. After they have gone one of the mounds begins to heave - slowly rising from the ooze to stand upright. As the mud drips off the swamp monster is revealed as a Mandrel, a fungal-looking creature with long, thrashing tendrils where its arms should be. Its eyes snap open. They are glowing a deep, swamp green.

Although the BBC still had a couple of Axon/Krynoid costumes left over (still on display at the Blackpool and Longleat exhibitions), the script required a whole zoo of the beasts, far more than could come from stock. Additionally, the Axons were expensive costumes, too expensive to afford constructing several more even if the costume designer had been inclined to use them. Instead Rupert Jarvis chose to go with something simpler and cheaper.

His main inspiration was the script's description of the Mandrels being fungus creatures. Thus the overall silhouette is that of a giant mushroom - a tall, skinny trunk topped with a wide cap.

Remote, cable-operated tendrils were out (too expensive), so Jarvis settled for extending the length of the arms, terminating them in sharp claws.

The basis of each costume was textured latex rubber backed with foam. (This inner foam backing is unfortunately visible as the Mandrel falls down unconscious in the power room.) The main body of the costume was a one-piece, suit zipped at the back, surmounted by a head-piece comprising a framework of wicker and wire into which batteries could be mounted to power the lights in the eyes. Because the *Empress* sets were lit so brightly, these green eyes were only clearly visible in the darker Eden set.

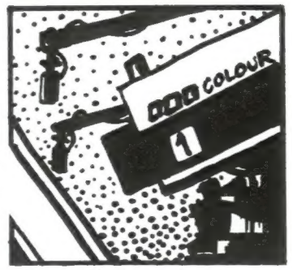
The operator saw out through a thin slit in the mouth (as is apparent on one occasion when a Mandrel peers out from Eden). The only separate pieces were the hands which were essentially elongated gauntlets, held in place by the artist grasping the end of a long stick running through each glove.

Five Mandrel suits were built. They were all the same size, although their rubber composition allowed them to be worn fairly comfortably by artists of different heights - making it seem as if the suits were also different heights.

Mandrel One had to be operated by a full Equity member (as opposed to those only permitted to play extras or walk-ons) since he was required to give a "directed performance". The role fell to James Muir.

The Mandrels were much mocked by fans at the time of transmission (described by the *DWAS Yearbook* as "cute reject[s] from *The Muppet Show*"). However, a report in *The Sun* before transmission asked "Is this Dr Who monster far too scary?", described how the Mandrels had already terrified children, and explained (incorrectly) that there were no studio photographs of Mandrels. □

Studio recording



THE STUDIO sessions were carefully planned to achieve a balance between the simpler, drama only scenes and those sequences requiring complex video lining up and recording.

Block one commenced Monday 12th August 1979 for three days in studio TC6. Sets for this session comprised the darkened luggage area, the *Empress* bridge and lounge (twice - see *Set Design*), some corridors, the Eden jungle and Stott's survival capsule, as well as all the models ready for shooting on the third., and final, day of recording. Only the primary cast, a couple of extras plus the Mandrels, were needed for this session.

Live action shooting took the best part of two and a half days, the most complex sequences being line-ups where characters had to be shot with guns, or scenes involving the CET machine where blue-screen techniques had to be employed to add in views of Eden or other planets. In all cases the views Romana saw through the CET projection were not specially shot but were from 35mm stock film provided by a facilities house (World Backgrounds of Elstree).

Recording the twelve model shots in the show required the remainder of day three, almost half the floorspace of TC6, and was a heavy schedule to get through. For the first shot of the *Hecate* the crew had to abandon the notion of tracking in fast on the spaceship and then worrying about tight focus on the hull. Instead they opted to shoot the sequence in reverse; starting with a close-up focused view of the hull, pulling back and then reversing the shot on video-disc to create the desired effect of zooming up on a collision course with the vessel.

By and large block one went fairly smoothly. All the model shots were recorded, although so tight was timing that the electricians pulled the plugs at 10:00 pm before the crew could complete their final agenda task; recording the title and end credit sequences for all four episodes.

On day two, "Eden Day", a slot was found to record a one minute trailer promoting the new season of **Doctor Who**, which was aired during the week leading up to DESTINY OF THE DALEKS episode one's transmission (see *IN-VISION* issue 39). Essentially it was the Doctor emerging from a flat of the TARDIS front (bearing a sign, "Do Not Disturb until September") being warned by a spectral voice (provided by Geoffrey Hinsliff) of some of the perils he will face in the coming year.

Cast, crew and a host of extras reconvened in TC6 almost a fortnight later on August 26th for a further three day's recording. But by this time tempers were starting to get a little frayed. Tom Baker was not on his best behaviour and began getting increasingly irritable whenever his "suggestions for script improvements" got turned down. Lalla Ward too had other things on her mind - whenever there was a break in recording she would wander off to a table and carry on with illustrations she was producing for a children's book on cats. Often it would take several reminders to call her back for recording takes.

The schedule for the three days comprised most of the scenes taking place in corridors, as well as those in the passenger pallets, the shuttle craft, aboard the *Hecate*, and in the *Empress* power unit. The scene in the power unit, as the Doctor dodges an attacking Mandrel, only to see it electrocuted and reduced to its component residue vraxoin, was heavily re-written. As scripted, the Doctor evades the Mandrel by turning off ship's gravity in the power unit, and literally leaping over his monstrous opponent like the **Six Million Dollar Man**. The use of Kirby wires had been envisaged for this scene, but cost ruled our their hire.

By the second day tempers were flaring, with many among the cast and crew feeling they were getting confused or muddled instructions from the gallery. At one point Tom Baker lost his temper completely and shouted into the microphone: "Is there a director up there or just a commentator?"

Unable to resolve the situation Graham Williams had to take drastic action. Following lunch, technicians and cast returned to find Alan Bromly had been dismissed and Graham Williams was now standing in as director. Never having directed before, Williams found it anything but an easy task (although of course he was able to call the shots from the camera script already prepared by Bromley), but he had no other choice. Questioned about this incident later at conventions, Williams cites it as the point at which the pressure finally got to him and he made his irrevocable decision to quit. □

Costume

WITH MONEY very tight, the margin for creativity within all the design groups was very limited The bulk of costume's budget went on the Mandrels, leaving little left over for the remaining cast. Simplicity was therefore the keynote with as many of the costume elements as possible coming from stock or bought off-the-peg as opposed to being made specially to measure.

Rigg's uniform, for example, was mostly off-the-peg; a black turtle-neck sweater over ski trousers and boots. Only his tunic, a sleeveless double-ply outfit in black and silver lurex, was created specially. Similarly the two customs officials, Fisk and Costa, wore standard security guard two-piece suits in black serge. Only the black, ruched braiding and trim were custom-made.

The safari outfits worn by Tryst, Della and Stott were Tyrollean in styling (an explanation, perhaps, for Lewis Fiander's adoption of a rather peculiar accent which is not stipulated in the script) black, sleeveless jerkins, belted at the waist, over white turtle neck sweaters and ski pants.

The silver astronaut suits were custom made, although very simple in design; one piece jump-suits in silver quilting with space helmets (see photograph of Tryst) supplied by the visual effects department.

The Doctor takes off his overcoat in the power room to reveal his (usually unseen) waistcoat. At the end ofpart four, after the Doctor had been grabbed by the Mandrels, a torn version of the coat (with detachable pieces) was also required. □

Cuts

NOT MUCH of the material of interest recorded for NIGHTMARE OF EDEN was cut prior to transmission. Dudley Simpson's incidental music was cut back from his original recorded compositions (see *Music*).

One sequence which was shortened was one in which the Mandrel, electrocuted by the Doctor in the Power Unit, decomposes into vraxoin powder.

This was initially a longer effects scene, including an extended shot of the Mandrel's face collapsing. It was trimmed back a few seconds for reasons both of timing and taste. □

Is this Dr Who monster far too scary?

By PHILIP PHILLIPS

FRIGHTENING new monsters called Mandrels menace Dr Who and Romana, his lovely assistant, in a new four-part series which begins tonight.

No one outside the BBC knows what the Mandrels look like. No photographs were taken of them while the series was being made.

But children who have bumped into them in the BBC studios have been terrified.

One small girl had to be carried out crying.

Cried

Jennifer Lonsdale, 26, who plays a zoologist in the opening episode of the series **(BBC 1, 6pm)**, says: "The little girl was the daughter of actor Barry Andrews, my boyfriend in the series.

"She seemed very frightened and cried out when she met the Mandrel. Her daddy had to take her out of the studio.

"I had a terrible fright myself when I saw my first Mandrel. They are terrifying.

"I think this Dr Who series is going to be very frightening."

Jennifer, who is single, says: "Actors work the Mandrels, but I don't know how they do it.

"The costume is about 9ft high and incredibly uncomfortable.

"There's a big frame built over it to form the head of the creature."

JENNIFER LONSDALE
A terrible fright

Story

Andrews, 30, says: "My six-year-old daughter, Hanna, was frightened when I took her to meet the Mandrels, so I took her away.

"These monsters are quite gruesome, and I feel some younger children may be frightened by them."

The Mandrels appear for the first time in the closing moments of tonight's episode.

Why were no photographs of the monsters taken during filming?

A BBC spokesman says: "We are short of photographers."

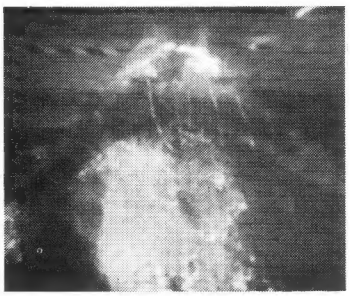
Tonight's story, Nightmare Of Eden, starts with a collision between two spacecraft.

The Doctor, played by Tom Baker, and Romana (Lalla Ward) arrive to find that something very sinister is happening on board the cruise liner Empress.

Visual effects

VISUAL EFFECTS designer Colin Mapson and his assistants had a lot to do on this story and were accorded a greater freedom of control than, say, Mat Irvine had been given on THE CREATURE FROM THE PIT. Two planning meetings, given over almost exclusively to discussing visual effects, were held on July 13th and 31st 1979.

Aside from the usual lot of guns, communicators and space helmets, Mapson also had to come up with a decomposing Mandrel for part three, and a deadly carnivorous plant with which to attack the Doctor. Although a standard trick was used of shooting the creepers coiling around the Doctor as a reverse shot onto video disc, Mapson's team still had the job of constructing the plant (out of wire and fabric), its tendrils and a taproot capable of spewing green gunge as the Doctor bites into it.



Visual effects also provided the drug-detector (which lit up as Costa scanned the Doctor's pockets), the Doctor's "interface zapper", the bits and pieces stuck together by the Doctor in the power unit, and the various watches and radiation counters seen in-shot. A variety of flashes and bangs were also required, from door locks exploding to the flight console's destruction by Tryst (and

Music

DUDLEY Simpson was once again responsible for the incidental music. He produced a straightforward score. This included the *Doctor's Theme* he had used several times before including in the scores for THE ARK IN SPACE and THE STONES OF BLOOD. The theme is used as the Doctor is stalked then attacked by a Mandrel in the Power Unit.

Once again, as with DESTINY OF THE DALEKS, not all the recorded music was dubbed on to the final transmission tapes. The decision not to use certain tracks was presumably taken by Graham Williams who by post-production was acting as both Doctor Who's producer and director. □

Part 1:
Opening Music **(Ron Grainer and BBC Radiophonic Workshop): 28"**
Closing Music **(Ron Grainer and BBC Radiophonic Workshop): 53"**
Incidental Music **(Dudley Simpson): 8'28"**
Incidental Music actually recorded: **10'37"**

Part 2:
Opening Music **(Ron Grainer and BBC Radiophonic Workshop): 31"**
Closing Music **(Ron Grainer and BBC Radiophonic Workshop): 51"**
Incidental Music **(Dudley Simpson): 8'01" (34" from part 1 used in reprise; other cues used twice)**
Incidental Music actually recorded: **6'48"**

Part 3:
Opening Music **(Ron Grainer and BBC Radiophonic Workshop): 28"**
Closing Music **(Ron Grainer and BBC Radiophonic Workshop): 53"**
Incidental Music **(Dudley Simpson): 11'39" (42" from part 2 used in reprise; 10" music from part 1 re-used; other cues used twice)**
Incidental Music actually recorded: **11'39"**

Part 4:
Opening Music **(Ron Grainer and BBC Radiophonic Workshop): 28"**
Closing Music **(Ron Grainer and BBC Radiophonic Workshop): 53"**
Incidental Music **(Dudley Simpson): 7'50" (1'00"" from part 3 used in reprise; other cues used twice)**
Incidental Music actually recorded: **6'10"**

Special sound

AS USUAL, Dick Mills supplied the special sound for NIGHTMARE OF EDEN. Much of this came from stock - like the background sounds for the planets on the CET projections, **most notably Eden.**

Other sound effects included the various gun shots, the roars of the Mandrel monsters (and their mewing noises as the

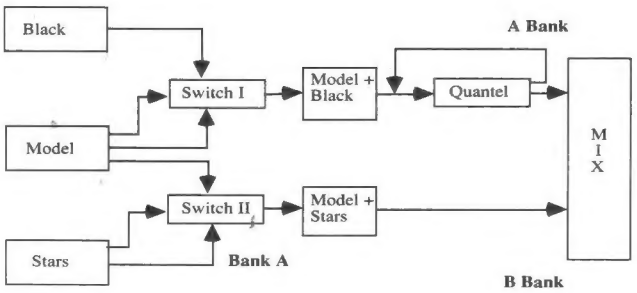
Doctor leads them, like the Pied Piper, back into Eden) and the sound made by the unstable matter interfaces. □

the destroyed console examined by the Fisk and, later, the Doctor). Interestingly, the explosion in the power unit causes the only Mandrel death in the story (though we learn that there are 12 people killed and 29 injured).

Visual effects' other main responsibility was for the spaceship miniatures. Regarding himself as a drama director, Alan Bromly had little involvement with shooting the spaceship sequences, all of which were scheduled into the final evening of block one's recording.

Mapson storyboarded and co-directed all the space shots, having already designed and overseen construction of the Empress, the *Hecate*, the shuttle craft, the docking bay miniature sets and the two perspex shapes which represented the planet Azure - one a small sphere on a pole to represent the whole planet seen from a distance, the other a large segment, also mounted on a pole, as the planet seen in close-up.

After Graham Williams had announced the cancellation of their filming session at Bray Studios, Colin Mapson and Mitch Mitchell together mapped out a strategy for doing Doctor Who's first ever moving miniatures shoot on video camera. It had already been done on **Blake's Seven** but not involving Quantel, blue screen, electronic effects, multi-camera co-ordination and special pedestal mounts to the degree envisaged by Mapson and Mitchell.



The diagram above shows Mitch Mitchell's design for the mixer desk set-up to achieve the shot of the Hecate leaving the Empress towards the end of part four.

Essentially what Mapson wanted to pioneer on **Doctor Who** was its first moving camera model shots. This is a technique where instead of the model moving on wires, the model stays static on a pylon and the camera moves.

Always keen on innovation, Graham Williams agreed to pay for the use of a Vinton camera boom. This has a cantilevered, counter-balanced arm. A lightweight camera can be fitted underneath the end of that arm such that it can be tilted, panned, and angled upwards or downwards by an operator working remotely behind the counter-weight.

One early shot from part one, for example, uses the Vinton arm. The camera shoots the *Empress*, aiming upwards from beneath the fuselage before pulling back and tilting to the horizontal to give the impression of the ship flying away into the distance. Slightly later on, there is another shot of the *Empress* is taken by a camera set-up for orange-lit Front Axial Projection so that the "Scotchlite" tape on the model makes the engine nacelles appear to glow. Both sequences were shot against a blue screen. Then, in turn, from the electronic effects desk, the latter shot could be mixed with a view of the Azure model (against black with a fog filter to diffuse the reflected light from the front-lit globe), and a shot of the familiar visual effects "star box", used whenever space backgrounds were required.

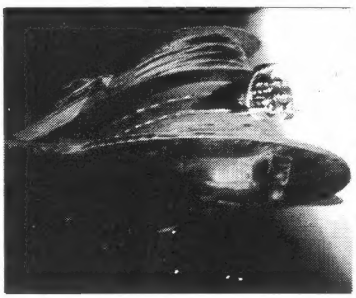
That was not the end of the work needed. The latter composite shot was also blended in with a scaled perspective view of the *Hecate*, and a reprocessed picture of the *Empress*, fed through a colour synthesiser. This produced the final picture: stars in background, Azure in middle-ground, the *Hecate* centre/right and the *Empress* materialising around it, rippling as it does so.

Up to four cameras were required for some of the more complex effects shots on NIGHTMARE OF EDEN.

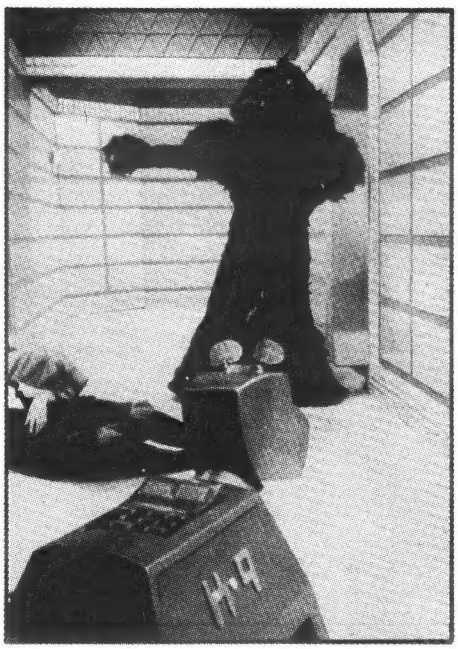
It is not known who produced the computer design of the *Empress* seen during the molecular scan for vraxoin, though it could have been visual effects or set design. □

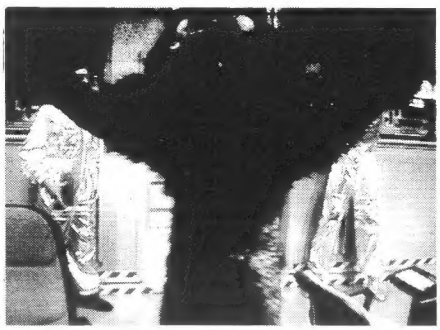
Post-production

RECORDING completed without further serious incident on August 28th. Two gallery-only days were then required to compile the many electronic effects required in the story. Sunday September 9th saw Mitch Mitchell and the crew concentrating on adding effects to the model work - for example, tints, lighting and colours to the ships, and foggy haloes around Azure. The complex and impressive electronic effects are discussed in more detail in our interview with Mitch Mitchell, elsewhere this issue.



However, there is evidence that one or two of the effects were done in a rush. For example, although the usual problem of aligning shots with K-9's gun muzzle (which points down at the ground) was solved once again by simply producing the "beams" at the necessary angle (see photo below), there are occasionally alignment problems with the other gun shots. When Della is shot down at the end of the story, she is hit in the neck but clutches her stomach. The difficult task of aligning "beams" with moving gun muzzles as various people herd the Mandrels back towards Eden was cleverly achieved by having many "beams" appear from out of shot, though there are some differences when guns are in-shot or when the Mandrels react. And when Dymond and Tryst fight off the Mandrel before escaping to *Hecate,* most of the gunshots are out of vision, obscured by the Mandrel (see photo, above). Unfortunately, when Dymond's gun comes into view, there are several special sound gunshots but only one "beam".



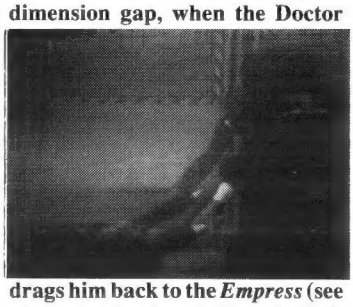


The second session, on September 23rd, added beams, ray gun effects and some of the inter-dimensional warping effects seen in the live action.

Make up

THE MAKE-UP department's only real opportunities to shine came whenever wounds were required.

The major wound was for Secker's fatal injuries following his encounter with a Mandrel in the dimension gap, when the Doctor drags him back to the *Empress* (see photograph, above), though Stott also bore the marks of a Mandrel attack throughout the story.



The wound marks were built up with layers of latex, scored and coloured to resemble claw slashes. As always, the dictate from Graham Williams was to avoid any blood.

Although she is bitten by an insect from the CET, there is no mark (or make-up) visible on Romana in a later view of her neck. □

Zoo TV

DAVID OWEN explains why NIGHTMARE OF EDEN's script deserved better in production

THOSE involved in it have occasionally said that **Doctor Who** is aimed at the "intelligent fourteen year old". These viewers take great delight in the dissemination of scientific (or pseudo-scientific) information than their older counterparts, and they are also more concerned with a cracking good story than, say, strong character development or romantic subplots. Similarly, they will prefer exciting special effects to moving performances, and are more likely to remember the names of the spaceships, planets and gadgets than of the supporting cast. If Bob Baker wrote NIGHTMARE OF EDEN with this audience in mind, then he hit the mark.

There is a strong emphasis on "hard" science fiction in the other stories in this series of **Doctor Who**, with black holes, spacecraft, laboratories, androids and time machines scattered liberally through it. But the trend is best exemplified in NIGHTMARE OF EDEN. In other stories, the science fiction elements in the series are often only there to justify a story's inclusion in the programme. (For example, THE CREATURE FROM THE PIT could just as easily be about a royal consul being held hostage in medieval Europe.) With NIGHTMARE, though, they are central.

The first such element is the CET, which can transmute areas of space into living recordings. This is effectively a mater transporter, although for good dramatic reasons this point is not emphasised. It is reminiscent of the MiniScope in CARNIVAL OF MONSTERS, albeit a little more sophisticated, and the Doctor is just as nonplussed by it. When Tryst avers that he is helping to conserve endangered species, the Doctor agrees: "Just in the same way a jam maker conserves raspberries."

Another key element is the warp smash when *Empress* comes out of hyperspace at the same point as *Hecate*. This possibility had consistently been overlooked in **Doctor Who** over the years, when one imagines how many times the TARDIS has materialised.

Finally, there is a species of monster which yields a powerful narcotic drug. The only way to keep humanity free from the ravages of the drug is to wipe out an entire species, which poses a new ethical dilemma since flora and not fauna have traditionally been the source of addictive substances.

Each element by itself would have been the basis of an excellent script. In combining them so productively, the writer creates what would make an excellent science fiction novel. Which is interesting, because the novel of *Nightmare of Evil* would have been more successful than what made it to the screen as NIGHTMARE OF EDEN. There are flaws in just about every single aspect of the production which let down the script, flaws which would strain the credulity of even the most enthusiastic fourteen year old.

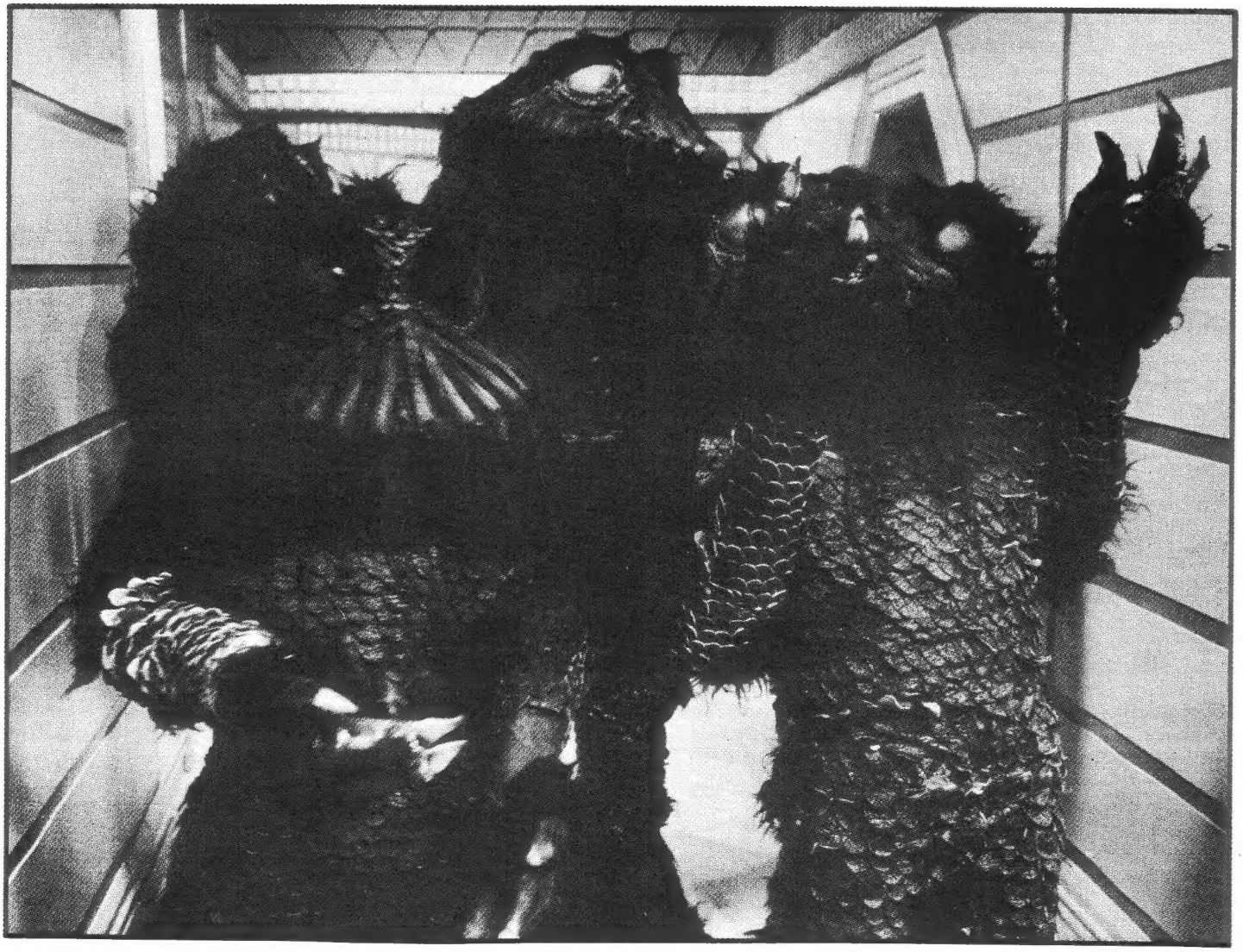
It's common to blame such shortcomings on the confining studio setting, but it is hard to see here where location filming would have helped. Certainly, the planet Eden recording in the CET could have been realised on film, but it would hardly have been worth it. Unlike THE DEADLY ASSASSIN, there isn't room in the whodunit plot or an episode spent wandering round virtual reality using up the film budget.

In **Doctor Who**, foam rubber monsters, wobbly sets, flying squeezy bottle and suspiciously familiar corridors have been almost excused by the sort of convincing performances which owe much, one suspects, to many years spent at drama school acting at mops and pretending to be rosebushes. Sadly, the performances here tend to be the stagey rather than the literal. Many of the scenes appear to be first takes, judging from the number of fluffed lines and altered pronunciations which suggest they thought they'd get a second chance.

Previously, drugs in the series were limited to the usual dramatic devices of spiked drinks, essential medication, and of course Chang's heroin in the taboo-smashing THE TALONS OF WENG-CHIANG. Along with overtly sexual themes, the effects of narcotics abuse on individuals and society had been off-limits to "family" programming like **Doctor Who** (although British telefantasy had dabbled with the idea in the **Blake's Seven** episode SHADOW, screened less than a year earlier). Bob Baker had also used the subject in he BBC's **Target**, starring Patrick Mower and featuring former **Who** regular Katy Manning as a junkie. NIGHTMARE is groundbreaking **Doctor Who**, in that as well as the Doctor describing the effects of vrax ("Bad stuff? It's the worst.") we also *see* them.

First there is Secker, whose addiction leads to the warp smash, portrayed both high as a kite and then in the tense misery of withdrawal. Then we see Rigg, an archetypal **Who** ally (initially suspicious, eventually friendly) turn from conscientious authority figure through giggling mess to trembling psychopath. David Daker's portrayal of Rigg is excellent, in contrast with most of the rest of the cast, in a very demanding role.

The only other convincing per-



formance is Jennifer Lonsdale, who adequately handles what she is given to do as Della. (Why are female characters lumbered with dainty first names like this, when their male counterparts get butch surnames like the uninteresting Stott?) Of the rest, Dymond is so one-dimensional that it is a wonder he needs a craft to travel through hyperspace at all, and Costa and Fisk can't hope to seem threatening in costumes Julian Clary would think twice about.

That leaves only Lewis Fiander's utterly astonishing performance as Tryst, which makes more sense with the hindsight that he is a ruthless criminal *pretending* to be a nutty professor with a Balkan accent. He is not a patch on Bob Baker's previous creation, Marius (superbly realised by Frederick Jaeger in THE INVISIBLE ENEMY). It is possible that the hidden darker side of the character prevented both writer and performer from pushing the comic side to its full advantage; this is hinted as in lines like "He was my mentor. We worked on this idea together, before he died of course. Then we stopped." Tryst's accent is annoyingly inconsistent. What could have been a subtly menacing character is spoiled by utterances like "sponshure" (sponsor) and "transmuder" (transmuter), though it isn't as irritating as Dymond deciding to drop the final syllable from his ship's name in the final episode. All of Tryst's inadequacies could have been overcome by simply dropping the accent completely when it is revealed that he is in league with Dymond, but as it stands the poor performance lies with Lewis Fiander rather than the character.

A convincing threat will sustain a drama through many difficulties, and the initial warp collision admirably performs that function with novel video effects substituting for the more pedestrian falling plaster and groaning bulkheads of more material collisions. Unfortunately, the instability of the matter interfaces is not sufficiently sustained, and the prime threat becomes the possibility of the Mandrels escaping the CET and roaming wild. They are among the least frightening monsters ever to have graced the series, and like Dymond sport the flared trousers which were *de rigeur* in 1979. They function in the script as non-sentient beasts, savage creatures with no motivation. So why they are portrayed as bipeds, which emphasises that they are just men in suits, is a mystery. The scene of the passenger massacre appears funny rather than chilling, and the passengers themselves such nonentities that you hardly care.

In true **Doctor Who** style ("the other 997 Daleks are there in the corridor"), the setting is kept in orbit around the planet Azure. This trick of avoiding having to portray an entire society by keeping a couple of miles off the ground was most notably employed by Stanley Kubrick in *2001: A Space Odyssey*. here, the setting (largely aboard the *Empress*) is a little too sparse and well-lit, emphasising the inadequacies of the costumes, especially the Mandrels. There's some variety in the more spartan confines of *Hecate* and the dark, steaming jungle of Eden, in which the Mandrels appear more convincing. With the production benefits from being entirely on video, including the model work with the ships phasing in and out of each other. But the sets look so unfinished that, occasionally, the effect is minimalist (the Power Room is four columns in an undressed black set).

The character dynamics are less successful than in the previous three stories, because the story lacks a character as the more traditional **Doctor Who** companion. The Doctor, Romana and K-9 seem so infallible that more vulnerable, yet sympathetic, characters such as Tyssan, Duggan or Organon were all that saved the viewers from alienation. Rigg in the first two episodes and Della in the last almost fill the gap, but there is little warmth in them.

With a few exceptions, post production confers a few favours on the story. The electronic effects are particularly striking, with the matter interfaces being very effective. The score too includes soothing "elevator music" to help the passengers during their in-flight massacre, and a stirring space fanfare to mark the free flight of the *Empress* - plus the "Doctor at work" theme as he toils away in the Power Room.

It's much easier to pound on about the flaws in NIGHTMARE than to extol its virtues. Which is a shame, as it really does have lots going for it. One is forced to conclude that, with a different production team from the outset, this could easily have been one of the more memorable stories of the decade.

The story's flaws are those that detractors of **Doctor Who** most often cite, and are concealed by them. Fortunately, the intelligent fourteen year old in the audience can sit back and enjoy the strengths and the weaknesses for what they are - great fun. □

Audience

MANY events surrounding **Doctor Who** were going on in November and December 1979, even if the programme itself was not making news headlines. Unlike the previous three stories, NIGHTMARE OF EDEN did not rate much coverage in the papers, or much more than its obligatory cast and crew column in *Radio Times*. In part this was due to the absence of any location filming or any big-name guest stars, who were always a temptation to press photographers. But in the main it was simply down to its status as a mid-season story. Having covered the last three shows, perhaps **Doctor Who** was deemed no longer newsworthy that year.

True, **Doctor Who** now had its own regular publicity vehicle in the form of *Doctor Who Weekly*, but such were Marvel Comics' initial problems trying to establish a relationship with the BBC that they were given almost no advance information or promotional material by the Corporation until January 1980, by which time the season was just about over and the soonest they could manage to print a photograph of a Mandrel was mid-February.

Despite the lack of media interest there was plenty of news about **Doctor Who**. As far back as August Douglas Adams had announced his intention to quit the series at the end of the year, not because he disliked working on the programme but because the workload on his own concept, *The Hitch Hiker's Guide to the Galaxy*, was increasing at such a pace that holding down, effectively, two jobs simultaneously was becoming an impossible burden for him.

Similarly Graham Williams told fans in November, as he had earlier to his boss Graeme MacDonald, of his plan to leave the producer's job in December. This was far more for personal reasons. Having worked three solid years on **Doctor Who**, tackling several major crises and enjoying very little holiday, he felt totally exhausted and in need of a rest to recharge his batteries. As he wrote in a fan newsletter, "Despite the rumours, we're not all built like K-9!"

But although **Doctor Who** was not in the news around the time NIGHTMARE OF EDEN was transmitted, the BBC as a whole certainly was. At the beginning of November a pay and grading dispute affecting BBC PAs led to widespread disruption of all programme making. Sporadically at first, studios were shut down, sometimes in mid-production. By early December all production had ground to a halt and the BBC was involved in one of the biggest strikes of its history.

Even **Doctor Who** was a casualty - see ***IN•VISION*** issue 44: SHADA for full details.

Unlike the earlier dispute at ITV, programme transmission was largely unaffected. NIGHTMARE OF EDEN went out on schedule and without interruption, attracting some good ratings in the process. With 8.7 million viewers and in 41st place nationally, episode one fared poorest, going out opposite ITV's new idea to run feature films around the six o'clock slot (although an exception was London Weekend Television who preferred to screen the latest season of the US action/adventure series **CHiPs** opposite **Doctor Who**).

By the second week it had recovered, rising to position 31 with a rating of 9.6 million, a figure it would repeat the following week. Episode four closed with a figure of 9.4 million yet still hung on to episode three's position at number 32 (and an audience appreciation of 65).

An average total of 9.3 million viewers per episode made NIGHTMARE OF EDEN the most popular story four in a season since THE FACE OF EVIL. □

ITV (London region) SATURDAY 24th NOVEMBER 1979

S P O R T S	N E W S	HAPPY DAYS	C.H.I.PS (new)		MIND YOUR LANG-AGE	THE INCREDIBLE HULK		FREDDIE STARR'S VARIETY MADHOUSE		THE PRO-FESSIONALS	N E W S	TWO PEOPLE play

5:00 5:30 6:00 6:30 7:00 7:30 8:00 8:30 9:00 9:30 10:00 10:30 11:00

BBC 1

S P O R T S	C A N E W S ON	BASIL BRUSH SHOW	DR. WHO Eden (1)	THE GENERATION GAME		SECRET ARMY		SHIRLEY BASSEY SHOW		DALLAS (new) series 2	N E W S	MATCH OF THE DAY

5:00 5:30 6:00 6:30 7:00 7:30 8:00 8:30 9:00 9:30 10:00 10:30 11:00

BBC 2

TENNIS	WITH A FINE HEAD OF STEAM	HORIZON rpt	OPEN DOOR	A DIARY OF BRIT -AIN	N E W S	opera THE RAJAH'S DIAMOND		film; IS IT HERE THAT THEY BEAT UP PEOPLE?		N E W S	TENNIS	

Trivia

A SUGGESTED ad-lib turned down by Alan Bromly, had Romana, just after she has entered the Eden projection, plucking an "apple" from a tree and offering it to the Doctor. He replies, "Weren't there enough problems caused by that last time..."

On the narrative side, we learn much about the time and space in which the story takes place. The planet Azure, above which the *Empress* and the *Hecate* collide, is in the West Galaxy - and evidently à holiday destination.

Punishments can be severe, as Water Guard Fisk, Landing Officer Costa, and Captain Rigg reveal at various points: driving your spaceship in a prohibited area merits at least a substantial fine, while being a vraxoin merchant (that is, a drug trafficker) is punishable by death. A Captain can also be executed for dereliction of duty.

Money appears to include thin orange-red blocks of plastic. Personal identification is carried on identity plaques.

The *Empress* is an interstellar cruise-liner, carrying 900 passengers in 67 (or more) passenger "pallets", which include economy and first class. We see that it has lifts supplemented with stairways, a lounge, drinks machines in its many corridors, a surgical room, and a power room. It does a standard run between Station Nine and Azure.

When in orbit the *Empress* is at seven-tenths G, although this does not seem to alter the characteristics of people's (or Mandrels') movements. We learn towards the end of the story that, despite its size, the *Empress* is faster than the *Hecate*.

The *Hecate* is, however, big enough to require a separate transport shuttle. Unlike everyone else, Dymond does not pronounce the final syllable in the name *Hecate*.

The *Galactic Salvage and Insurance* company which the Doctor claims to be acting for was formed in London, Earth in 2068. It was liquidated in 2096 - which Rigg says was twenty years ago, which dates the story in 2116. The company was originally *Cosmos Insurance* in the script. It was changed to avoid any possible links with (and lawsuits from) the Cosmos travel agency group.

Vraxoin (abbreviated to "vrax") is another name for the drug XYP. The source of the drug is said to be a fungus (fitting better with the script's original definition of the Mandrels than their eventual screen realisation).

The Doctor has seen "whole communities, whole planets" destroyed by vraxoin. It induces warm complacency followed by total apathy and resulting in death. The only source of the drug (prior to its discovery on Eden) was destroyed - the whole planet was incinerated.

Tryst, picked up by the *Empress* at Station Nine wants to be the first zoologist to quantify all life in the galaxy. He is having trouble getting funding partly because of the galactic recession. As a result he is a government-subsidised passenger, which means he is travelling first class (with his own key to the first class bathroom).

On their expedition, the zoologist reached the planets by shuttle and, if they needed to, they would have been able to take additional records on visprints.

Tryst's CET machine (Continual Event Transmuter) was based on work he did with his mentor and friend, the late Professor Stein. The Doctor also knew Stein. The CET converts specimens to electro-magnetic signals stored on a laser crystal (or Event Crystal - one for each location or group of locations, it seems). The specimens continue evolving and can be seen in the projection. Taking the specimens leaves bald patches on the planets from which the areas were removed.

The Doctor is horrified that the machine does not have a dimensional osmosis damper. Components it does appear to have include: spacial integrator, transmution oscillator, holographic retention circuit, matrix modulator, and transmutation reflex (though the last two may be additions by Romana).

When the specimens recorded on the laser crystals are replayed, they are restructured on an intradimensional matrix (all mixed up together since there is no dimensional osmosis damper).

Tryst's expedition ship was the *Volante* (a name implying theft - of animals?), which had a crew of ten (including Della and Stott, who became "more than friends"). In part, his last expedition went through the Cygnus Gap, then did a slingshot over to a small system of just three planets (M37).

The second of those planets supports life in a very early stage of evolution - molluscs, primitive insects and (it is implied though never actually stated) Mandrels.

The planets recorded/stored on the CET include Gidi (a windswept planet), the jungle-planet Eden, Zil, Vij, Darp, Lvan, Brus, and Ranx (which is sunny). These are all marked as locations on the CET selection panel, though the number of crystals carried into the TARDIS at the end of the story by the Doctor and Romana suggest there could have been many more.

Only the Mandrels (and one insect) appear to escape from the projections, which suggests that the other planets have flora and fauna which are (a) unadventurous or (b) immobile.

It is not certain how Romana worked out that the escaped creatures were from Eden, especially as she appears to turn the selection indicator to a completely different name when viewing the location.

After the collision, the two ships begin to reject each other (like a failing tissue transplant).

The drinks dispensers set into the walls on the Empress must be double-sided (so they can be accessed from two corridors or rooms at once). This is never properly shown, but if this is *not* the case then whoever puts vraxoin in the drink which Rigg takes must be hiding actually *inside* the machine (possibly the inspiration for a similar trick in the *New Adventures* novel *Lucifer Rising*?). When Rigg appears drunk as a result of the drug, Tryst offers him a caffedeine capsule.

Stott is a major in the intelligence section of Space Corps. When he finds his way out of the Eden projection into the *Empress*, he has been stranded on Eden for 183 days.

Dymond's computer on board the *Hecate* includes details of the financial projections for Tryst and Dymond's *Eden Project* in galactic credits (the symbol for a galactic credit is a lowercase z). Projected turnover is z13,000,000. Overheads are listed as z3,900,000, which makes the projected profit margin z9,100,000.

To complete their operation, Tryst and Dymond intend to transfer the Eden data (including the encoded vraxoin) from the CET machine on the *Empress* to an identical machine on the *Hecate*. To do this they transfer the recording using an Entuca Laser - which can carry thousands of telecomm messages (or a laser crystal projection).

Reportedly, Bob Baker was annoyed that Lewis Fiander adopted a bizarre Germanic accent when playing Tryst. Fiander's costume may have made him think of doing this, or maybe it is more than coincidence that the character's spectacles make him look like Peter Sellers in *What's New Pussycat?* Whichever was the case, it was not scripted that Fiander should deliver lines like "I theenk the Doctor is in serioos trabool".

One suggestion has been that the basic story idea came from Douglas Adams. However, CARNIVAL OF MONSTERS is an obvious comparison: both stories deal with a machine that shrinks creatures and projects images of them for observation, and which is operated by a man-and-woman team (Tryst and Della/Vorg and Shima); in both, dangerous specimens escape from the system.

A BBC photographer was on set August 13th to do a photocall, contrary to comments made to the national press. □

Continuity

WE LEARN that K-9 can track the Doctor to the extent of being able to detect whether he is aboard the *Empress*. We also find out that his scanners do not work in a matter interface, and the Doctor admits grudgingly that K-9, "a perfectly ordinary electric dog", beat him at chess ("once"). Once again jump-leads are attached to K-9's ears - this time to get more power to the CET machine. K-9 makes a sniffing noise when scanning a new friend.

The Doctor, when asked his date of birth says it is some time quite soon (he thinks).

When Dymond returns from the *Hecate* to the Empress in the shuttle, he plugs his space suit into the shuttle's air-supply socket when the shuttle depressurizes. The Doctor puts himself into a trance (as in TERROR OF THE ZYGONS, among other stories) in order to survive without air.

At the end of the story, the Doctor and Romana leave (Romana hinting that only K-9 would ever be at home in an electronic zoo!) promising to re-project the CET laser crystals on to their original planets. This implies that the TARDIS (or some equipment within it) has similar capabilities to the CET machine. The Doctor and Romana are aware of similarities between the TARDIS and Tryst's machine: the CET uses a relative dimension field, restructured on an intradimensional matrix.

Asked by Romana whether they should interfere, the Doctor retorts: "Of course we should interfere. Always do what you're best at." Romana also reveals that Russian dolls are a model of the universe.

As in a number of other stories, the Doctor carelessly leaves the TARDIS door open throughout a long section of the story. □

NIGHTMARE OF EDEN

CAST

Doctor Who Tom Baker
Romana Lalla Ward
Voice of K-9 David Brierley
Rigg David Daker (1-3)
Dymond Geoffrey Bateman
Tryst Lewis Fiander
Della Jennifer Lonsdale
Stott Barry Andrews (uncredited for part 1)
Fisk Geoffrey Hinsliff (2-4)
Costa Peter Craze (2-4)
Secker Stephen Jenn (1)
Crewmen Richard Barnes (1-3), Sebastian Stride (3-4), Eden Philips (4)
Passengers Annette Peters (2), Lionel Sansby (2), Peter Roberts (2), Maggie Petersen (2-3)

SMALL & NON-SPEAKING

Computer Voice Pamela Ruddock (1)
PA Announcer (voice) Geoffrey Hinsliff (1)
Crewman 1 David Cole (1,3-4)
Crewman 2 Mark Kirby (1,3-4)
Crewman 3 Simon Sutton (1,3-4)
Crewman 4 Terence Creasy (1,3-4)
Medic 1 Reg Turner
Medic 2 Gary Dean
Stewardess Sally Sinclair (1-2)
Passenger / Wounded Passenger Billy Gray
Passengers Ann Garry Lee (1-3), Pat Judge (1-3), Judy Roger (1-3), Jean Channon (1-3), Jenny Roberts (1-3), Madelaine Simpson (1-3), Audrey Searle (1-3), Derek Hunt (1-3), Jay Roberts (1-3), Greg Marlowe (1-3)
Mandrel 1 James Muir
Mandrel 2 Derek Suthern (2-4)
Mandrel 3 David Korff (2-4)
Mandrel 4 Jan Murzynowski (3-4)
Mandrel 5 Robert Goodman (2-4)

CREW

Title Music Ron Grainer & the BBC Radiophonic Workshop
Designer Roger Cann
Design Assistant Carol Smith
Costume Designer Rupert Jarvis
Make-up Artist Joan Stribling
Make-up Assistants Elizabeth Hardiment, Sinikka Ikaheimo
Visual Effects Designer Colin Mapson
Properties Buyer Robert Fleming
Production Assistant Carolyn Montagu
Director's Assistant Monica Rodger
Assistant Floor Manager Val McCrimmon
Floor Assistant Alison Barnett
Studio Lighting Warwick Fielding
Technical Manager Terry Brett
Studio Sound Anthony Philpott
Senior Cameraman Peter Hider
Crew 11
Vision Mixer Nigel Finnis
Electronic Effects A.J. Mitchell
Videotape Editor Rod Waldron
Show Working Supervisor Chick Hetherington
Special Sound Dick Mills
Incidental Music Dudley Simpson
Writer Bob Baker
Production Unit Manager John Nathan-Turner
Script Editor Douglas Adams
Directors Alan Bromley (studio 1), Graham Williams (studio 2 - uncredited)
Producer Graham Williams

Season 17, Story 107 (5K)
Episodes 518 - 521

Part 1: 24 November 1979, 18.01.18 (24'17") 8.7m viewers, 41st
Part 2: 1 December 1979, 18.04.51 (22' 44") 9.6m viewers, 31st
Part 3: 8 December 1979, 18.03.08 (24'06") 9.6m viewers, 32nd
Part 4: 15 December 1979, 17.56.05 (24' 31") 9.4m viewers, 32nd

RECORDING
Studio session 1 (studio TC6)
12 August 1979 - Rehearse 14:00; Record 19:30 - 22:00
13 August1979 - Rehearse 10:30; Rehearse/Record 14:30 - 17:15; Record 19:30 - 22:00
14 August1979 - Rehearse 10:30; Rehearse/Record 14:30 - 17:15; Record 19:30 - 22:00
Studio session 2 (studio TC6)
26 August 1979 - Rehearse 11:00; Record 19:30 - 22:00
27 August 1979 - Rehearse 10:30; Rehearse/Record 14:30 - 17:15; Record 19:30 - 22:00
28 August 1979 - Rehearse 10:30; Rehearse/Record 14:30 - 17:15; Record 19:30 - 22:00
Gallery only (Electronic Effects in studio TC3)
31 August 1979 - Rehearse/Record 11:00 - 22:00

PROJECT NUMBERS
Part 1: 02349/2741
Part 2: 02349/2742
Part 3: 02349/2743
Part 4: 02349/2744

INSERT NUMBERS
Part 1: 02349/9031
Part 2: 02349/9032
Part 3: 02349/9033
Part 4: 02349/9034

PROGRAMME NUMBERS
Part 1: LDLB013K/71/X
Part 2: LDLB014E/71/X
Part 3: LDLB015Y/72/X
Part 4: LDLB016S/71/X

FILM (all 35mm)

Part 1:
Opening Titles 28"
Closing Titles 53"
Purchased programme film - World Background, Elstree Studios (silent) 22" (35ft)

Part 2:
Opening Titles 28"
Closing Titles 53"

Part 3:
Opening Titles 28"
Closing Titles 53"

Part 4:
Opening Titles 28"
Closing Titles 53"

□

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DWB 61 (Dec 1988)
Doctor Who Magazine 10th Anniversary Special (Oct 1989)
Doctor Who Magazine 188 (8 July 1992), A.J.Mitchell (Electronic effects)interviewed by Marcus Hearn
Eye of Horus 7 (Oct 1984)
Files Magazine: Season 17 (1986)
Five Hundred Eyes 3 (Dec 1988)
Jagaroth 3 (Jan 1984)
Matrix 5 (Feb 1980)
Proteus 3 (Feb 1991)
Second Dimension 3/9 (Sept 1990)
SFT 3 (Oct 1985)
Spectrox 4 (Sept 1986)
Stock Footage 4 (Jan 1986)
Tardis 11/1 (April 1986); *Special* (Dec 1983)
Views, News & Reviews 18 (July 1985)

FILM

2001: A Space Odyssey (Kubrick, 1968)
The Concorde: Airport '79 (Rich, 1979)
Airport (Seaton, 1970)
Airport 75 (Smight, 1974)
Airport 77 (Jameson, 1977)
What's New Pussycat? (Donner, 1965)

TELEVISION

Blake's Seven (BBC 1978-1981)
CHiPs (NBC, 1977-1983)
Coronation Street (Granada)
Doctor Who (BBC, 1963-1989)
The Hitch-Hiker's Guide to the Galaxy (BBC, 1980)
Out of the Unknown (BBC, 1965-1971)
Shoestring (BBC, 1978)
Six Million Dollar Man (ABC, 1973-1978)
Target (BBC, 1978)
Top of the Pops (BBC)

DOCTOR WHO

The Ark in Space (4C)
City of Death (5H)
The Creature from the Pit (5G)
Destiny of the Daleks (5J)
The Face of Evil (4Q)
The Green Death (TTT)
The Hand of Fear (4N)
The Horns of Nimon (5L)
Image of the Fendahl (4X)
The Invasion of Time (4Z)
The Nightmare of Eden (5K)
Planet of Evil (4H)
Shada (5M)
The Stones of Blood (5C)
The Time Warrior (UUU)

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